

Europäisches Patentamt **European Patent Office** Office européen des brevets



EP 0 961 260 A3

(12)

EUROPEAN PATENT APPLICATION

- (88) Date of publication A3: 01.03.2000 Bulletin 2000/09
- (51) Int CI7: G09G 5/02, G09G 1/16

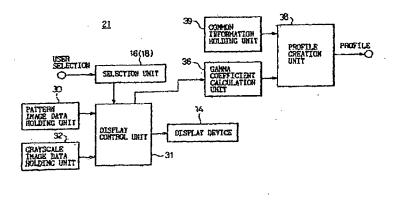
- (43) Date of publication A2: 01.12.1999 Bulletin 1999/48
- (21) Application number: 99301638.5
- (22) Date of filing: 04.03.1999
- (84) Designated Contracting States. AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE Designated Extension States: ALLT LV MK ROSI .
- (30) Priority: 27.05.1998 JP 14578798
- (71) Applicant: FUJITSU LIMITED Kawasaki-shi, Kanagawa 211-8588 (JP)
- (72) inventors:
 - Murashita, Kimitaka, c/o Fujitsu Limited Kawasaki-shi, Kanagawa 211-8588 (JP)

- Suzuki, Shoji, c/o Fujitsu Limited Kawasaki-shi, Kanagawa 211-8588 (JP)
- Mori, Masahiro, c/o Fujiteu Limited Kawasaki-shi, Kanagawa 211-8588 (JP)
- (74) Representative: Hitching, Peter Matthew et al Haseltine Lake & Co., Imperial House, 15-19 Kingsway London WC2B 6UD (GB)
- Input/ouput characteristic measurement method and apparatus for display device (54)

A display control unit (31) reads out a dot pattern image from a pattern image data holding unit (30) and a grayscale pattern image containing a plurality of grayscale patches of gradually varying gray scale from a grayscale image data holding unit (32), and presents the thus readout images for display on a display device (14). A user selects the grayscale patch having brightness closest to the brightness of the dot pattern image by operating a selection unit (16). Based on the selection, a gamma coefficient value is calculated by a gamma coefficient value calculation unit (36), and based on this gamma coefficient value, a profile creation unit (38) modifies an International Color Consortium (ICC) profile held in a common information holding unit (39) and thus creates a customized ICC profile.

Such apparatus can create an ICC profile in a simple manner without using a specialized measuring instrument.

Fig.2



Printed by Jouve. 75001 PARIS (FR)

From: 8064986673 To: 00215712738300 Page: 84/88 Date: 2005/8/8 下午 03:16:38

EP 0 961 260 A3



EUROPEAN SEARCH REPORT

Application Number EP 99 30 1638

LASSIFICATION OF THE
9G5/02
9 G1 /16
ECHNICAL FIELDS EARCHED (INLCLS)
-
•
Y BATHERINE T
ella, L
on and a second
e 1

2

From: 8064986673 To: 00215712738300 Page: 85/88 Date: 2005/8/8 下午 03:16:38

EP 0 961 260 A3



Application Number

EP 99 30 1638

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filling more than ten cidims.
Only part of the daims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten daims and for those claims for which claims fees have been paid, namely claim(s):
No olaims tees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

From: 8064986673 To: 00215712738300 Page: 86/88 Date: 2005/8/8 下午 03:16:38

EP 0 961 260 A3



EUROPEAN SEARCH REPORT.

Application Number EP 99 30 1638

Category	Ottation of document with in	ERED TO BE RELEVANT	Relevant	CLASSIFICATION OF THE APPLICATION (Ind.CLE)
gary	of relevent passe	iges .	to olaim	ALECCIONA factori
A	EP 0 665 680 A (CAN	ON KK)	11,16	1
	2 August 1995 (1995	-U8-U2)	1	
	* page 2, line 26 - * page 5, line 58 -	nage 6 line 19 *	1	
	* figures 5-7 *	Lade at title as	ł	
	1		1	
A	EP 8 597 797 A (IBM)	22,23,	
	18 May 1994 (1994-0	5-18)	25,27, 31,32	
	* column 3, line 43	- column 4, line 15 *		
	* column 7, line 9	- column 8, line 18 *		
	* figure 1 *	- column 8, line 18 *	1 .	
4	1	EX TECHNOLOGIES INC)		
A	21 March 1996 (1996	-03-21)		
	C. HELCH 1990 (1990		1	
•				
			İ	
		•	1	
	•	_	ŀ	TECHNOCAL FIELDS SEARCHED (INLCLS)
			1	
			1	
:	,			
		·	ì	
			1	
		•	1	
			1	
	[
			Ì	1
		·		
	The present search report has I			
	Place of search	Date of completion of the example		Examiner
	THE HAGUE	21 December 199		ricella, L
C	ATEGORY OF OITED DOCUMENTS	T : theory or print E : earlier petent o	iple underlying the document, but publi	invention shed on, or
X:par	ticularly relevant if taken sions	efter the Simple Dericonument sim	iate d in the equiposion	
doc	ticularly relevant if combined with anothern of the same calegory	L : document allo	d for other reasons	
A:ted	finological background n-written disologica armadiate document	& ; member of the document	same paters family	r, corresponding

4

From: 8064986673 To: 00215712738300 Page: 87/88 Date: 2005/8/8 下午 03:16:39

EP 0 961 260 A3



LACK OF UNITY OF INVENTION SHEET B

Application Number

EP 99 30 1638

The Search Division considers that the present European patent application does not compty with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-21,34,35

Method and apparatus for measuring the characteristics of a display device by simultaneously displaying a pattern region and a gray scale region on the display.

2. Claims: 22-31

Calibration method and apparatus for a display device using a network interconnection to collect data relating to the color profile of the display.

3. Claim : 32

Calibration apparatus for a display device including transmission of calibration data at specified times.

5

EP 0 961 260 A3

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 99 30 1638

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP tile on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-12-1999

US 5739809 A 14-04-1998 US 5570108 A 29-10-1998 US 5499040 A 12-03-1998 WO 9600435 A 04-01-1998 EP 0785672 A 23-07-1997 NONE EP 0665680 A 02-08-1995 JP 7222009 A 18-08-1998 EP 0597797 A 18-05-1994 US 5502458 A 26-03-1998 CA 2105356 A 11-05-1998 CA 2105356 A 11-05-1998 CA 2105356 A 11-05-1998 CA 1086912 A 18-05-1998 DE 69319848 D 27-08-1998 DE 69319848 T 25-03-1998 JP 2051708 C 10-05-1998 JP 2051708 C 10-05-1999 JP 6208360 A 26-07-1999 KR 130742 B 15-04-1998 MX 9303885 A 31-05-1999 WO 9600811 A 21-03-1996 US 5565897 A 15-10-1998 WO 9600811 A 21-03-1996 US 5565897 A 15-10-1998	Potent document cited in search report	1	Publication date	Patent family member(s)	Publication date
US 5739809 A 14-04-1998 US 5570108 A 29-10-1998 US 5499040 A 12-03-1998 WO 9600435 A 04-01-1998 EP 0785672 A 23-07-1997 NONE EP 0665680 A 02-08-1995 JP 7222009 A 18-08-1999 CA 2105356 A 11-05-1999 CA 2105356 A 26-07-1999 CA 2105356 A 210-05-1999 CA 2105356 A 2105556 A 2105356 A	US 5638117	A	10-06-1997	NONE	
US 5499040 A 12-03-1997 WO 960435 A 04-01-199 EP 0785672 A 23-07-1997 NONE EP 0665680 A 02-08-1995 JP 7222009 A 18-08-199 EP 0597797 A 18-05-1994 US 5502458 A 26-03-199 AT 168808 T 15-08-199 CA 2105356 A 11-05-199 CA 2105356 A 11-05-199 DE 69319848 D 27-08-199 DE 69319848 T 25-03-199 JP 2051708 C 10-05-199 JP 6208360 A 26-07-199 JP 7092655 B 09-10-199 KR 130742 B 15-04-199 MX 9303885 A 31-05-199 US 5614925 A 25-03-199 WO 9600811 A 21-03-1996 US 5565897 A 15-10-199 EP 0781444 A 02-07-199	US 5298993	A	29-03-1994		10-05-199 10-02-199
EP 0665680 A 02-08-1995 JP 7222009 A 18-08-1995 EP 0597797 A 18-05-1994 US 5502458 A 26-03-1995 CA 2105356 A 11-05-1995 CN 1086912 A 18-05-1995 DE 69319848 D 27-08-1995 DE 69319848 T 25-03-1995 JP 2051708 C 10-05-1995 JP 6208360 A 26-07-1995 KR 130742 B 15-04-1995 MX 9303885 A 31-05-1996 US 5565897 A 15-10-1995 WO 9600811 A 21-03-1996 US 5565897 A 15-10-1995 EP 0781444 A 02-07-1995	US 5739809	A	14-04-1998	US 5499040 A	29-10-199 12-03-199 04-01-199
EP 0597797 A 18-05-1994 US 5502458 A 26-03-190 AT 168808 T 15-08-190 CA 2105356 A 11-05-190 CN 1086912 A 18-05-190 DE 69319848 D 27-08-190 DE 69319848 T 25-03-190 JP 2051708 C 10-05-190 JP 6208300 A 26-07-190 JP 7092655 B 09-10-190 KR 130742 B 15-04-190 MX 9303885 A 31-05-190 US 5614925 A 25-03-190 WO 9608811 A 21-03-1996 US 5565897 A 15-10-190 EP 0781444 A 02-07-190	EP 9785672	Α	23-07-1997	NONE	
AT 168808 T 15-08-193 CA 2105356 A 11-05-193 CN 1086912 A 18-05-193 DE 69319848 D 27-08-193 DE 69319848 T 25-03-193 JP 2051708 C 10-05-193 JP 6208360 A 26-07-193 JP 7092655 B 09-10-193 KR 130742 B 15-04-193 MX 9303885 A 31-05-193 US 5614925 A 25-03-193 WO 9608811 A 21-03-1996 US 5565897 A 15-10-193 EP 0781444 A 02-07-193	EP 0665680	A	02-08-1995	JP 72220 09 A	18-08-199
WU 9608811 A 21-03-1990 EP 0781444 A 02-07-199	EP 0597797	A	18-05-1994	AT 168808 T CA 2105356 A CN 1086912 A DE 69319848 D DE 69319848 T JP 2051708 C JP 6208360 A JP 7092655 B KR 130742 B MX 9303885 A	26-03-199 15-08-199 11-05-199 18-05-199 27-08-199 25-03-199 10-05-199 26-07-199 09-10-199 15-04-199 31-05-199
	WO 9608811	A	21-03-1996	EP 0781444 A	15-10-199 02-07-199 08-09-199

D For more details about this annex; see Official Journal of the European Patent Office, No. 12/82